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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/697,418

10/30/2003

Christian Fleischhacker

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06/14/2005

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EXAMINER

NGUYEN, MINH T

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/697,418

Applicant(s)

FLEISCHHACKER ET AL.

Examiner

Minh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8, 10-17 and 20 is/are rejected.
- 7) ☒ Claim(s) 4, 9, 18, 19, 21 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/11/05 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-8, 10-11 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,245,646, issued to Jackson et al.

As per claim 5, Jackson discloses a circuit arrangement for filtering an electrical signal (Figs. 1-3, the arrangement comprises a filter section shown in Fig. 3 and a control section shown in Fig. 1), comprising:

an active filter (Fig. 3, the filter is an active filter because it comprises an op-amp) including at least one adjustable capacitor (42, adjustable by controlling switches 90-94) that

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determines frequency response (the overall capacitance value of the capacitors determines the frequency response of the active filter 40);

a circuit to determine a measure of the frequency response (Fig. 1, circuits 12 and 14 and 18, column 3, lines 60-62, the changes from the nominal frequency response of the active filter are “measured” by the capacitor 26 and resistor 24 as compared to reference signals REF1, REF2 and REF3).

a memory arrangement (decoder 34, column 7, lines 2, i.e., the decoder 34 may be a memory) which stores a plurality of parameters (Fig. 2, the parameters are the controlling values for selecting the capacitance of the active filter) for adjusting the at least one adjustable capacitor (the control signals B0-B4 from the decoder 34 are used to control switches 60-64 and 90-94 shown in Fig. 3 to adjust the capacitance of the active filter shown in Fig. 3); and

a control device (Fig. 1, the counter 32) to select a stored adjustment parameter depending on the determined measure of the frequency response and on a nominal frequency response fed to the circuit arrangement and to adjust the at least one adjustable capacitor on the basis the selected adjustment parameter (one of the stored adjustment parameters B0-B4, shown in Fig. 2, is selected by the control device counter 32; the control device 32 uses the determined measure fed by the comparator 30 and the predetermined nominal frequency fed to the circuit to adjust the capacitance value of the filter circuit).

As per claim 6, the recited invariable base capacitor reads on capacitor 84 which is invariable, and the recited an adjustable capacitor component reads on the switch 94 which is a component used to control the invariable capacitor 84 so that the overall capacitance of the active filter is adjustable.

As per claim 7, the capacitors 80-84 and switches 90-94 clearly meet the recited limitations.

As per claim 8, Fig. 2 shows the recited limitation, labels "0" and "1" clearly represent digital values in binary form.

As per claim 10, resistors and capacitors in the active filter 40 shown in Fig. 3 indicate a time constant (i.e., time constant = RC) as the frequency response.

As per claim 11, the truth table shown in Fig. 2 clearly shows the time constants are normalize, i.e., see Fig. 1, the counter using frequency of the clock signal CLOCK for normalization.

As per claim 13, the recited reference capacitor reads on the capacitor 26. The recited function is described in column 3, lines 60-66.

As per claim 14, by adjusting the capacitance value of the capacitors of the active filter shown in Fig. 3, there will be one value which is the same as the capacitance value of the capacitor 26.

As per claim 1, this claim is merely a method to operate an active filter circuit having the structure recited in claim 5, since Jackson teaches the circuit, he inherently teaches the method to operate.

As per claims 2-3, these claims are rejected for the same reasons noted in claims 10 and 11, respectively.

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,245,646, issued to Jackson et al.

As per claim 12, Jackson discloses a circuit arrangement as discussed in claim 5 but he does not explicitly disclose the components of the circuit arrangement are integrated into a semiconductor as called for in the claim.

However, in column 2, lines 1-25 he explicitly discloses the disadvantages of using discrete components versus integrating the circuit into a semiconductor device.

It would have been obvious to one skilled in the art at the time of the invention was made to integrate the components of the Jackson circuit discussed in claim 5 to a semiconductor substrate for the motivation which is to avoid the disadvantages disclosed in column 2, lines 1-25 of the Jackson reference.

As per claim 16, Jackson discloses a circuit arrangement as discussed in claim 5 but he does not explicitly disclose the nominal frequency is selected from a plurality of given nominal frequency responses as called for in the claim.

However, as recognized by a person skilled in the art, a filter which is capable of providing a plurality of nominal frequency responses can be used in applications which require different nominal frequency responses. One example of such application would be a filter which is used for selecting a specific channel in a TV set.

It would have been obvious to one skilled in the art at the time of the invention was made to modify the Jackson's filter arrangement so that the nominal frequency response can be selected from a plurality of nominal frequency responses. The modification and/or suggestion would be to enable the Jackson's arrangement to be used in applications which require the selecting of different nominal frequency responses.

As per claim 15, this claim is rejected for the same reasons noted in claim 16.

4. Claims 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,245,646, issued to Jackson et al. in view of US Patent No. 6,417,727, issued to Davis (cited in the previous Office action).

As per claim 20, Jackson discloses a circuit arrangement as discussed in claim 5 wherein the frequency response of the filter can be adjusted by adjusting the capacitance value of the adjustable capacitors 42 shown in figure 3 but he does not explicitly disclose a fixed capacitor is connected in parallel with the adjustable capacitor as called for in the claim.

Davis teaches a filter circuit wherein the frequency response of the filter can be adjusted by adjusting the capacitance value of adjustable capacitors and a fixed capacitor connected in parallel (figure 4).

It would have been obvious to one skilled in the art at the time of the invention was made to include a fixed capacitor connected in parallel to the adjustable capacitors in the Jackson's filter circuit. The motivation and/or suggestion would be to ensure that the frequency response of the filter circuit will be in a meaningful range, i.e., when switches B0, ..., B4 are all open, without

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a fixed capacitor, the capacitance value is zero, the frequency response of the filter would not be in a meaningful range.

As per claim 17, this claim is rejected for the same reasons noted in claim 20.

Response to Arguments

5. Applicant's argument filed on 5/11/05 has been fully considered but it is not persuasive.

The argument is that Jackson's circuit arrangement is used for a filter which has a single predetermined nominal frequency response whereas the claim requires the nominal frequency response may be externally selected from a plurality of given nominal frequency responses.

The argument is irrelevant to claims 1 and 5 because these claims do not require the nominal frequency response is selected from a plurality of given nominal frequency responses. With regard to claims 15 and 16, the argument is moot in view of new ground of rejections.

Allowable Subject Matter

6. Claims 4, 9, 18-19 and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 9 and 21-22 are allowable because the prior art of record fails to disclose or suggest the inclusion of a structure of the circuit arrangement which performs the function of filling at least one bit in the address word length with a digital value of the determined measure of the frequency response and filling at least one digit in the address word length with a digital value of the nominal frequency response as recited in claim 9.

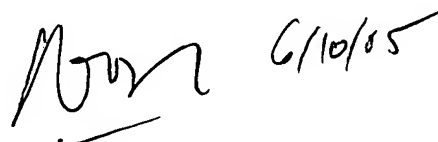
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Claims 4 and 18-19 are allowable for the reasons noted in claim 9.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is 571-272-1748. The examiner can normally be reached on Monday, Tuesday, Thursday, Friday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Minh Nguyen
Primary Examiner
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